Caltrans

# Water Quality NewsFlash

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**Recharge – *Groundwater standards may constrain recharge, injection projects*** – The City of Tracy and other communities are considering *Aquifer Storage and Recovery* (ASR) projects as a way to store water and address shortages during droughts. ASR projects use wells to both inject and recover water. Tracy's proposed ASR project has run into problems because the drinking water intended for recharge does not comply with groundwater standards listed in the Basin Plan. In particular, the drinking water contains disinfection byproducts (trihalomethanes–THMs and haloacetic acids–HAAs) at concentrations above health-based limits. Other constituents of concern include pollutants which may affect agriculture and other pollutants typically present in the surface waters used as the source of the drinking water (metals, pesticides, pharmaceuticals, and endocrine disruptors). Another compliance issue is anti-degradation. State Water Board Resolution No. 68-16, *Policy with Respect to Maintaining High Quality Waters of the State*, requires a Regional Board to maintain existing high quality waters of the state (i.e., background water quality) with limited exceptions.

Yet another concern is the Point of Compliance (i.e., the location in the groundwater at which the standards are applied). The *Policy for Application of Water Quality Objectives* contained within both of the Basin Plan states that "…Water quality objectives apply to all waters within a surface water or groundwater resource for which beneficial uses have been designated, rather than at an intake, wellhead, or other point of consumption." In effect, this means that those injecting water or otherwise discharging to the groundwater cannot take advantage of the mixing and dilution occurring before the water is extracted. Nevertheless, the Board staff proposed the short-term test project be allowed to proceed even though it would pollute the groundwater. Regional Board Issue Paper: http://www.swrcb.ca.gov/rwqcb5/tentative/Contested/ASRProjects/ASRIssuePaper.pdf

Many groundwater recharge projects use spreading basins (shallow ponds) for infiltrating surface waters. These are assumed to present less risk to groundwater because of the pollutant attenuation that takes place in the upper levels of soil. Some of these spreading operations necessitate waste discharge requirements (WDRs) issued by Regional Boards and others do not, depending on the perceived threat to groundwater. The Santa Ana Basin receives significant recharge by spreading basins. USGS sampled 207 wells in the Basin and found a wide range of contaminants at generally low concentrations: http://water.usgs.gov/pubs/wri/wri02-4243/text.html .

A related question concerns stormwater infiltration projects and incidental percolation from stormwater basins. Although stormwater infiltration should not have THM/HAAs, other pollutants, including pathogens, will normally be present in higher concentrations than in drinking water. Infiltration of stormwater is viewed as a major compliance option for several TMDLs and for stormwater control in general. For example, the cost estimates for the LA River and Ballona Creek metals TMDLs assume that 20% of the two watersheds would be treated by 14,643 infiltration trenches. The City of Los Angeles' *Integrated Plan for the Wastewater Program* (IPWP) has a goal of capturing and beneficially reusing 50% of the annual average wet-weather urban runoff. Large scale stormwater infiltration could potentially have groundwater impacts. The compliance status and permitting requirements of these large scale infiltration programs with respect to state requirements are unclear at this time. Federal requirements for infiltration wells are discussed in *NewsFlash 03-42* and *03-43*.

WQ NewsFlash is a weekly update of storm water and related news for the Department. *Verify information before taking action on these bulletins*. Contact Betty Sanchez, Betty_Sanchez@dot.ca.gov (916) 653-2115, or Fred Krieger, (510) 843-7889, fkrieger@msn.com with questions or to be added or deleted from e-mail list. Posted online at: http://www.dot.ca.gov/hq/env/stormwater/publicat/newsflash/index.htm